

Appln No. 09/779,184

Amdt date March 12, 2004

Reply to Office action of November 13, 2003

REMARKS/ARGUMENTS

The above identified patent application has been amended and reconsideration and reexamination are hereby requested.

Claims 1 - 18 are now in the application. Claims 1, 11 and 18 have been amended.

The Examiner has rejected Claims 1 - 18 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement.

The Applicants believe that the Examiner has may have inadvertently construed the present invention to cover merely a point-point optical connection between two network elements with a single optical fibre forming the point-point link. While a single optical fibre connection between each pair of neighbouring network elements for carrying an optical signal is provided, such connection must be construed in conjunction with the network structure being a ring network structure. As can be seen in Fig. 1c, the ring connects hub 102 to hub 104 and back the hub 102. However, in accordance with an embodiment of the present invention a first single optical fibre connection in the ring is made from hub 102 over a primary path 144 counter-clockwise to hub 104 and a second single optical fibre connection in the ring is made from hub 102 over a secondary path 146 clockwise to hub 104. In essence, for the case of only two network elements, there are two single optical fibre connections defined over one optical ring, the primary path being usable as a primary data transmission path, the secondary path being usable as a back-up protection path.

Appln No. 09/779,184

Amdt date March 12, 2004

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Accordingly, the Applicants submit that Claims 1 - 18 under 35 U.S.C. §112, first paragraph, comply with the enablement requirement.

The Examiner has also rejected Claims 1 - 17 under, U.S.C. §112 second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention.

Firstly, the Examiner states that the Applicants are claiming an embodiment that is different than what the specification teaches.

Given the preceding arguments, the Applicants submit that the claimed embodiments are taught in the specification and drawings.

Secondly, the Examiner notes that the claim language grammar of Claim 11 makes it unclear as to what is actually claimed.

The Applicants have amended Claim 11 to call for (underlining added for emphasis) ... wherein the optical ring network structure transmits un-protected other data on the groups of wavelengths provided for the redundant data transfer in a normal operational state of the optical ring network structure. This aspect of the invention finds support on page 17, in the paragraph identified as 2.7.4.

Accordingly, the Applicants submit that Claims 1 - 18 particularly point out and distinctly claim the subject matter which the Applicants regard as the invention.

The Examiner has objected to the Drawings indicating that every feature of the invention specified in the claims. In

Appln No. 09/779,184

Amdt date March 12, 2004

Reply to Office action of November 13, 2003

particular, the Examiner states that the bi-directional data and redundant data transfer on a single [fibre] must be shown or the feature(s) canceled from the claim(s).

The Applicants submit that the bi-directional data and redundant data transfer on a single fibre is shown in the Drawings. Figure 1c discloses a single-fibre optical ring 106, and two network elements 102, 104. It further discloses a first single-fibre optical connection between network elements 102 and 104, indicated in Figure 1c as a primary path 144 "portion" of the single-fibre ring 106. It further discloses a second single-fibre connection between the network elements 102 and 104, indicated as a secondary path 146 "portion" of the single-fibre ring 106. As such, the Applicants submit that further drawings need not be added to appropriately depict the claimed aspects of the invention.

The Examiner has rejected under 35 U.S.C. §103(a) Claims 1 - 8 and 10 - 18 as being unpatentable over Kai et al., and Claim 9 being unpatentable over Kai et al. in view of Egnell et al.

The Applicants amended Claim 1 calls for (underlining added for emphasis) ... An optical ring network structure comprising: two or more network elements; and ...a single optical fibre connection between each pair of neighbouring network elements for carrying an optical signal; ... wherein the ring network structure is arranged in a manner such that, in use, band allocation utilising multiplexing on each single fibre connection is chosen in a manner such that groups of wavelengths for bi-directional data transfer and for bi-directional

Appln No. 09/779,184

Amdt date March 12, 2004

Reply to Office action of November 13, 2003

redundant data transfer for protection respectively are provided on each single fibre connection.

The Applicants submit that the invention as claimed in Claim 1 is neither taught, described or suggested in Kai et al.

Kai et al., while providing for fibre connections used between neighbouring network elements in an optical ring network, Kai et al. clearly discloses that two fibre connections are used between neighbouring network elements in an optical ring network, one for normal data transmission, and one for protection. Kai et al. fails to disclose or suggest an optical ring network structure in which data transmission and protection transmission are implemented on respective single-fibre connections between neighbouring network elements on the ring.

Accordingly, the Applicants submit that Claim 1 is not unpatentable over Kai et al.

Claims 2 - 17 are dependent on Claim 1. As such, these claims are believed allowable based upon Claim 1.

The Applicants amended Claim 18 calls for (underlining added for emphasis) ... A method of distributing data on a optical ring network structure, the optical ring network structure comprising two or more network elements, the method comprising the step of: distributing a bi-directional multiplexed optical signal on single optical fibre connections between each pair of neighbouring network elements, wherein band allocation utilising multiplexing on each single fibre connection is performed in a manner such that groups of wavelengths for bi-directional data transfer and for bi-

Appln No. 09/779,184

Amdt date March 12, 2004

Reply to Office action of November 13, 2003

directional redundant data transfer for protection respectively
are provided on each single fibre connection.

The Applicants therefore submit that the invention as claimed in Claim 18 is neither taught, described or suggested in Kai et al. for the same reasons set forth above for Claim 1.

Accordingly, in view of the above amendment and remarks it is submitted that the claims are patentably distinct over the prior art and that all the rejections to the claims have been overcome. Reconsideration and reexamination of the above Application is requested.

Respectfully submitted,

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